

FIG. 1

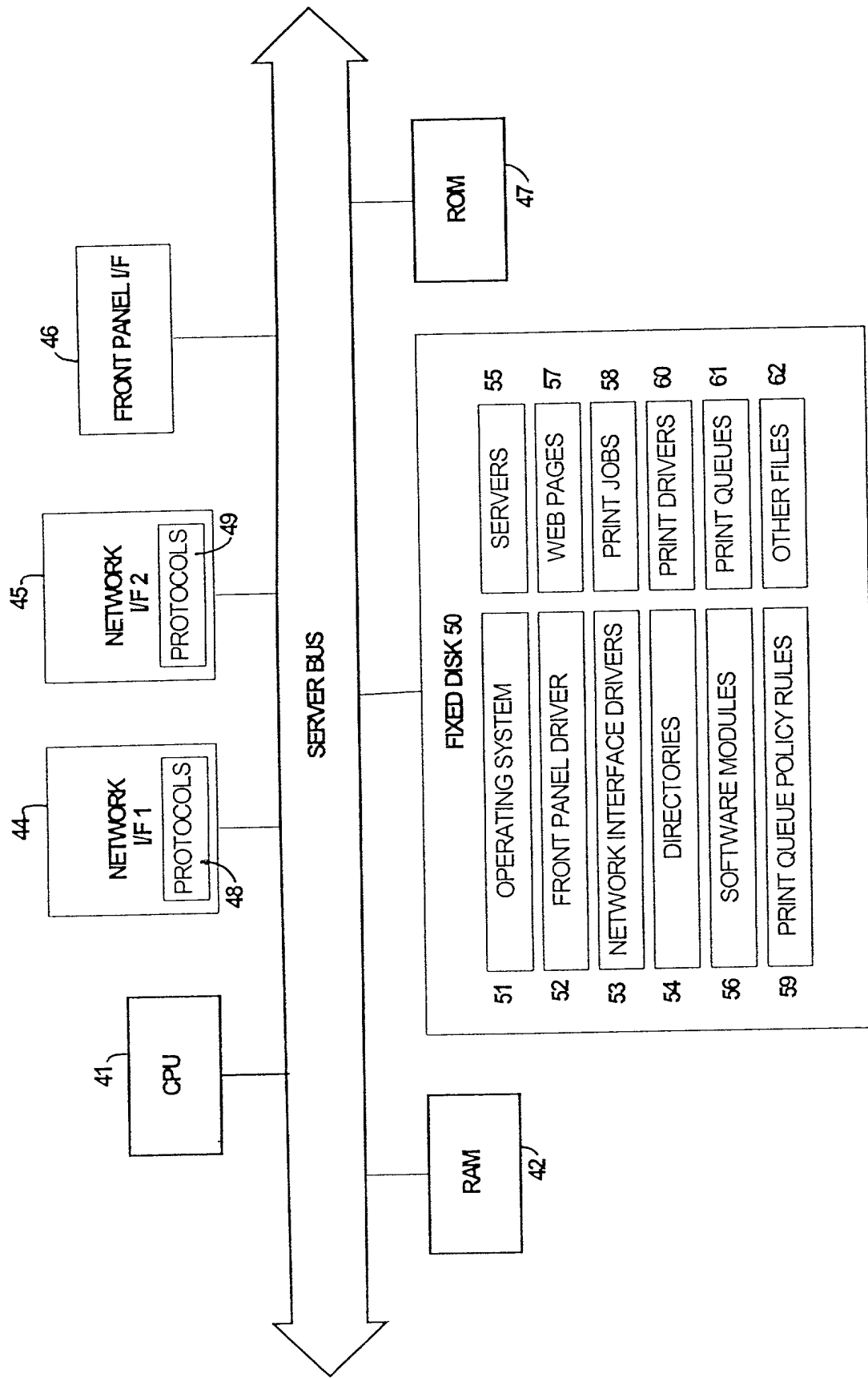


FIG. 2

DIRECTORIES 54

70

Device Management Directories

71

Print Queue Configuration Directory

72

Services Directories

FIG. 3

09895021 062804
"09290" 2056960

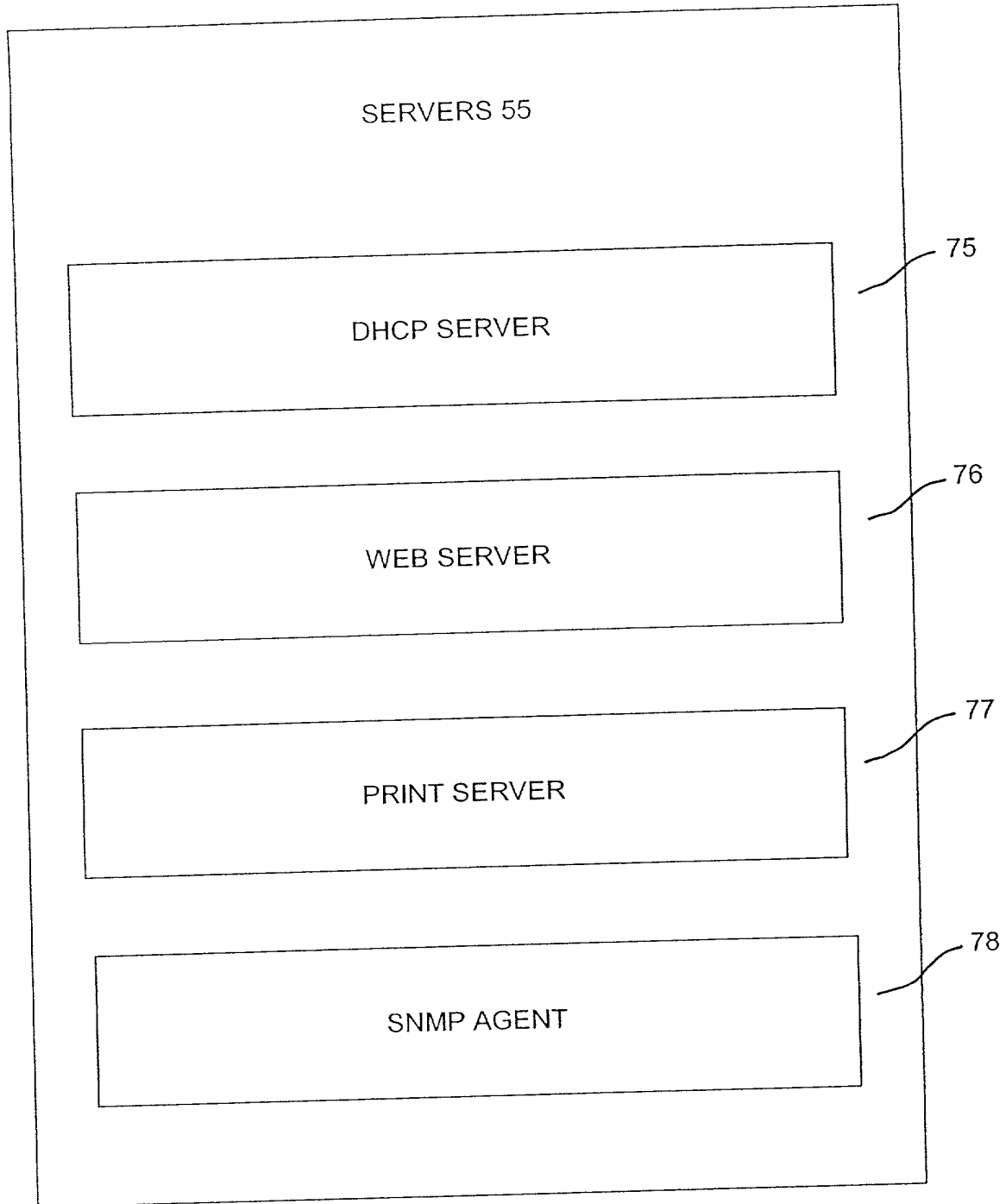


FIG. 4

SOFTWARE MODULES 56

80 DHCP Listening Module

81 Virtual Device Modules

82 Functional Application Modules

83 Print Queue Service Module

84 Discovery Module

85 Print Queue Service Manager Module

87 Discovery Service Manager Module

Fig. 5

WEB PAGES 57

86 ~ Network Configuration Web Page

88 ~ Queue Service Web Page

89 ~ Print Queue Web Page

Fig. 6

DEVICE MANAGEMENT DIRECTORY 70

ENTRY 90	MAC ADDRESS 91	PRINT DEVICE TYPE 92	IP ADDRESS 93	NETWORK CONFIGURATION INFORMATION 94
Entry 1	00:00:85:69:0A:B3	Canon Laser	129.65.220.8	Domain Name, etc.
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
--	--	--	--	--
Entry N	-	--	--	--

Fig. 7

PRINT QUEUE CONFIGURATION DIRECTORY 71

	IP ADDRESS 100	MAC ADDRESS 101	PRINT QUEUE NAME 102	PRINTING CAPABILITIES 103	SERVER 105
ENTRY 1	129.65.220.8	00:00:85:69:0A:B3	Canon Laser	Color, Letter, A4	Main A
--	--	-	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--
--	--	--	--	--	--
ENTRY N	-	--	-	--	--

Fig. 8

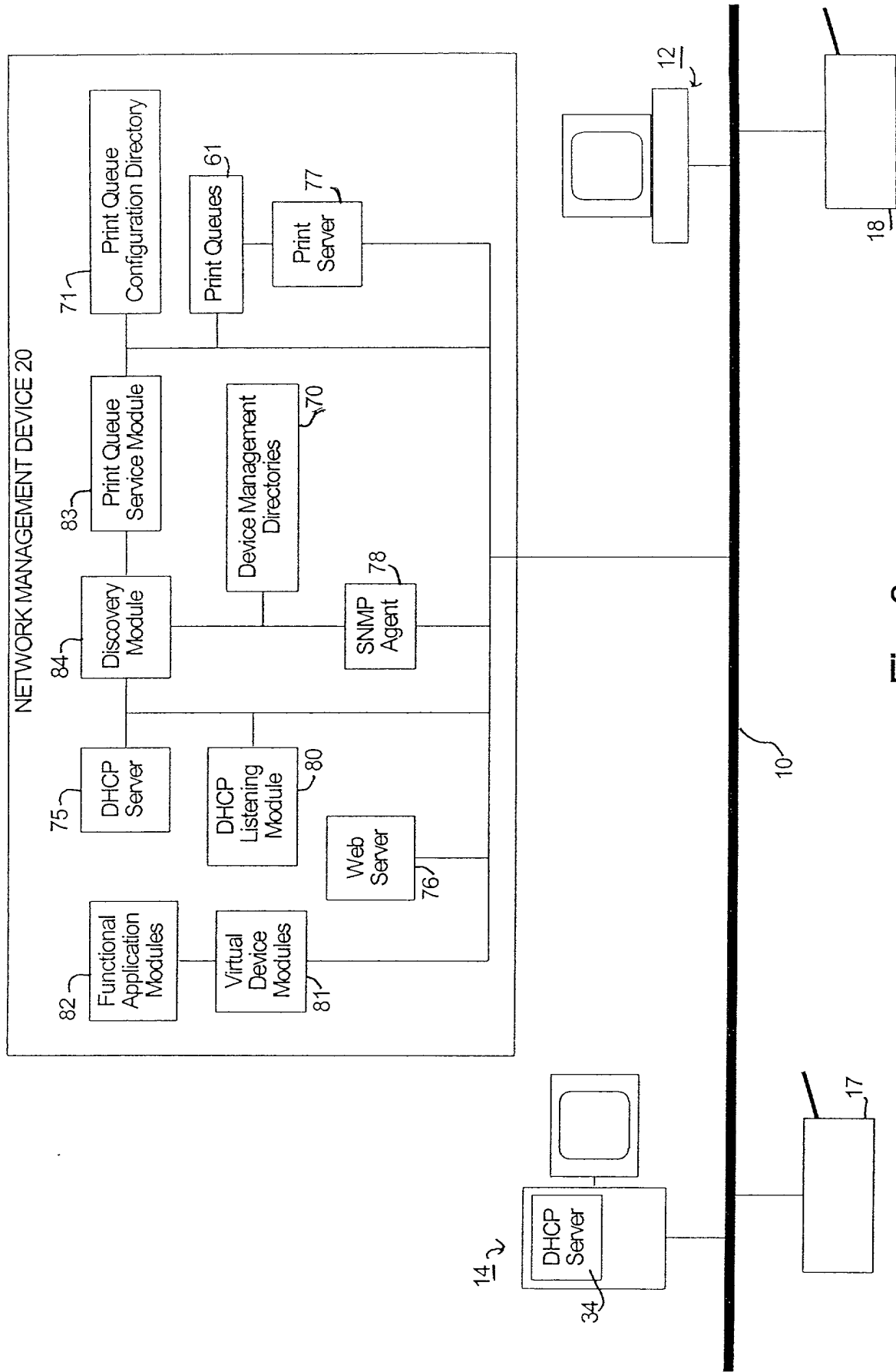


Fig. 9

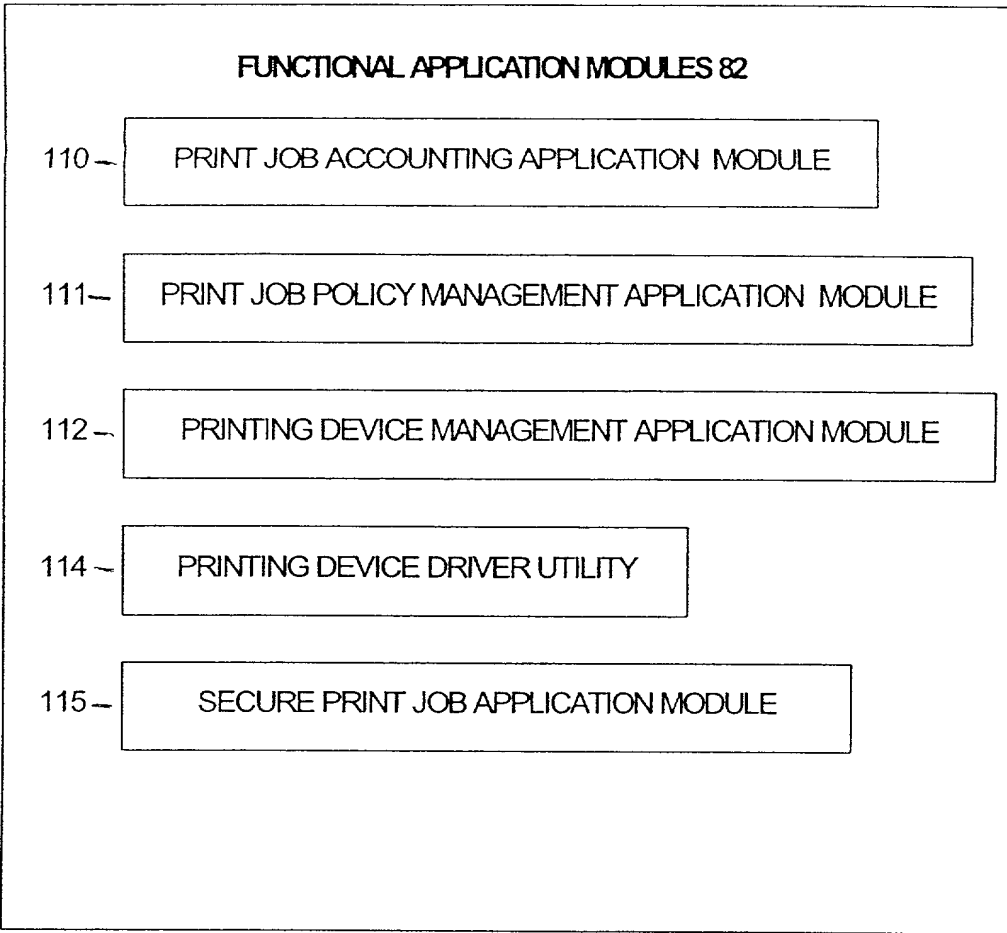


Fig. 10

120

LOCAL SERVICES DIRECTORY			
SUBNET ID	122	124	125
		SERVICE	NMD ID
1		DISCOVERY	NMD 1
1		PRINT QUEUE	NMD 2

121

GLOBAL SERVICES DIRECTORY			
SUBNET ID	122	124	125
		SERVICE	NMD ID
1		PRINT QUEUE	NMD 1
1		DISCOV. SERV. MGR.	NMD 3
1		GLOBAL INFO SERV.	NMD 1

FIG. 11

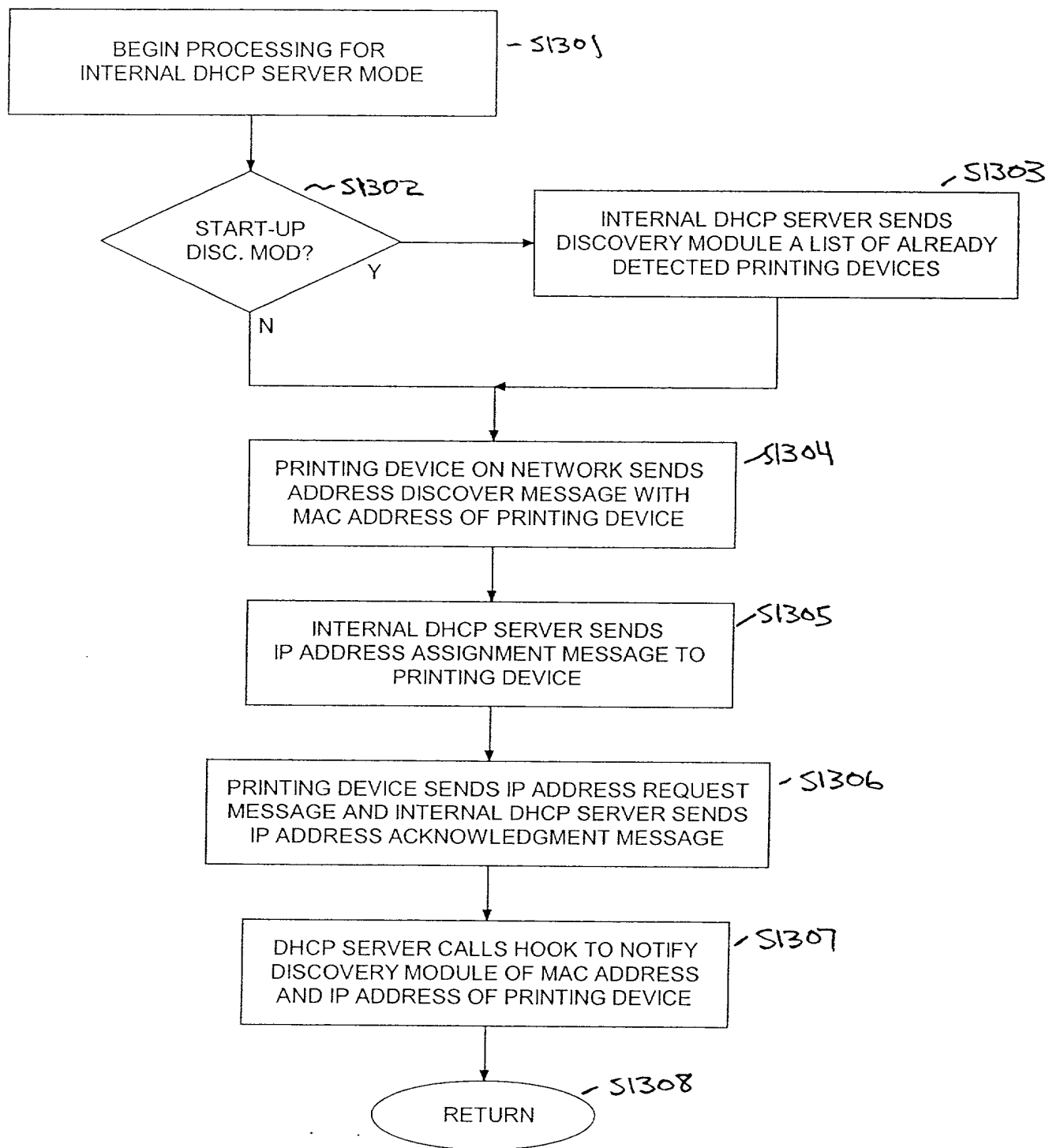


FIG. 13A

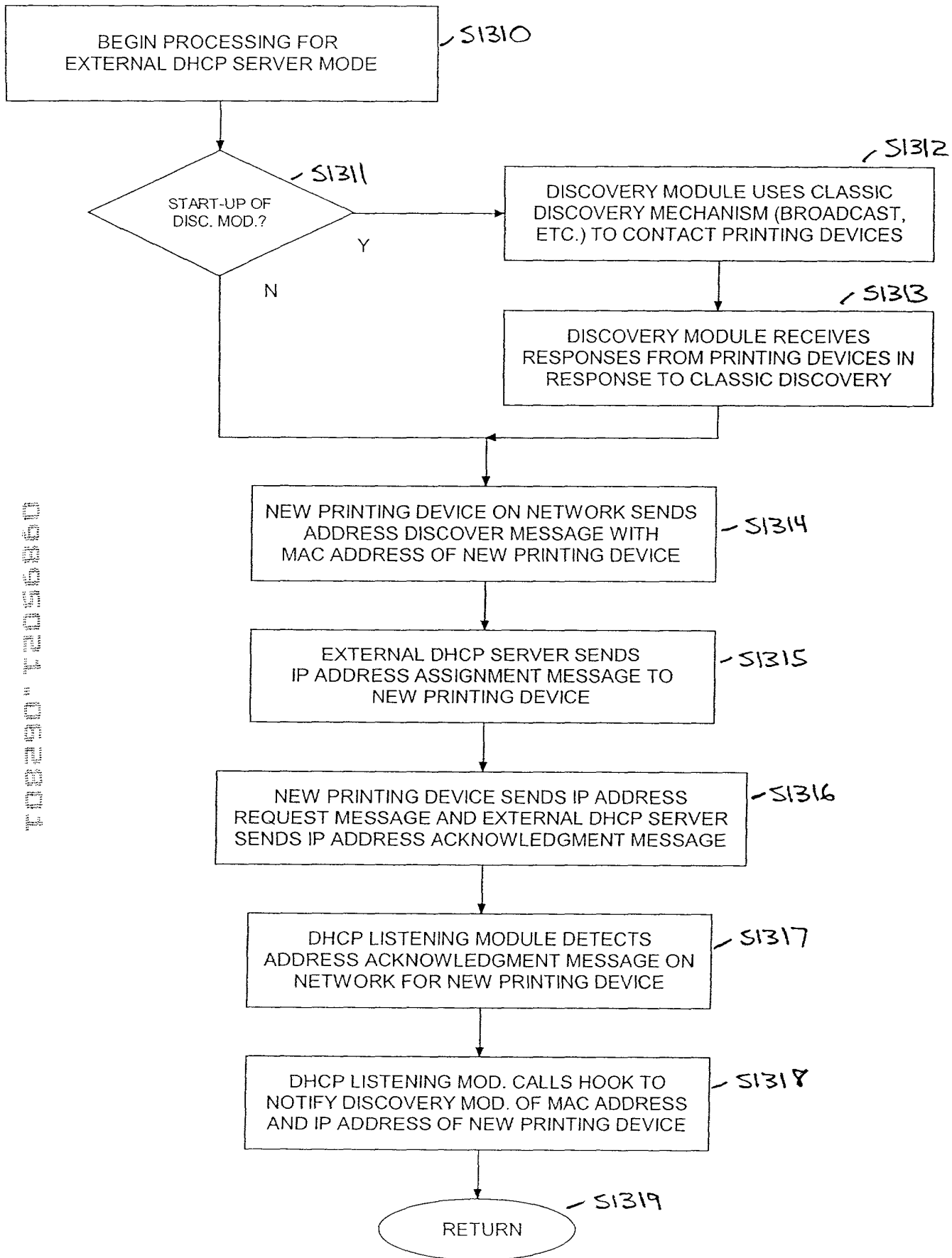


FIG. 13B

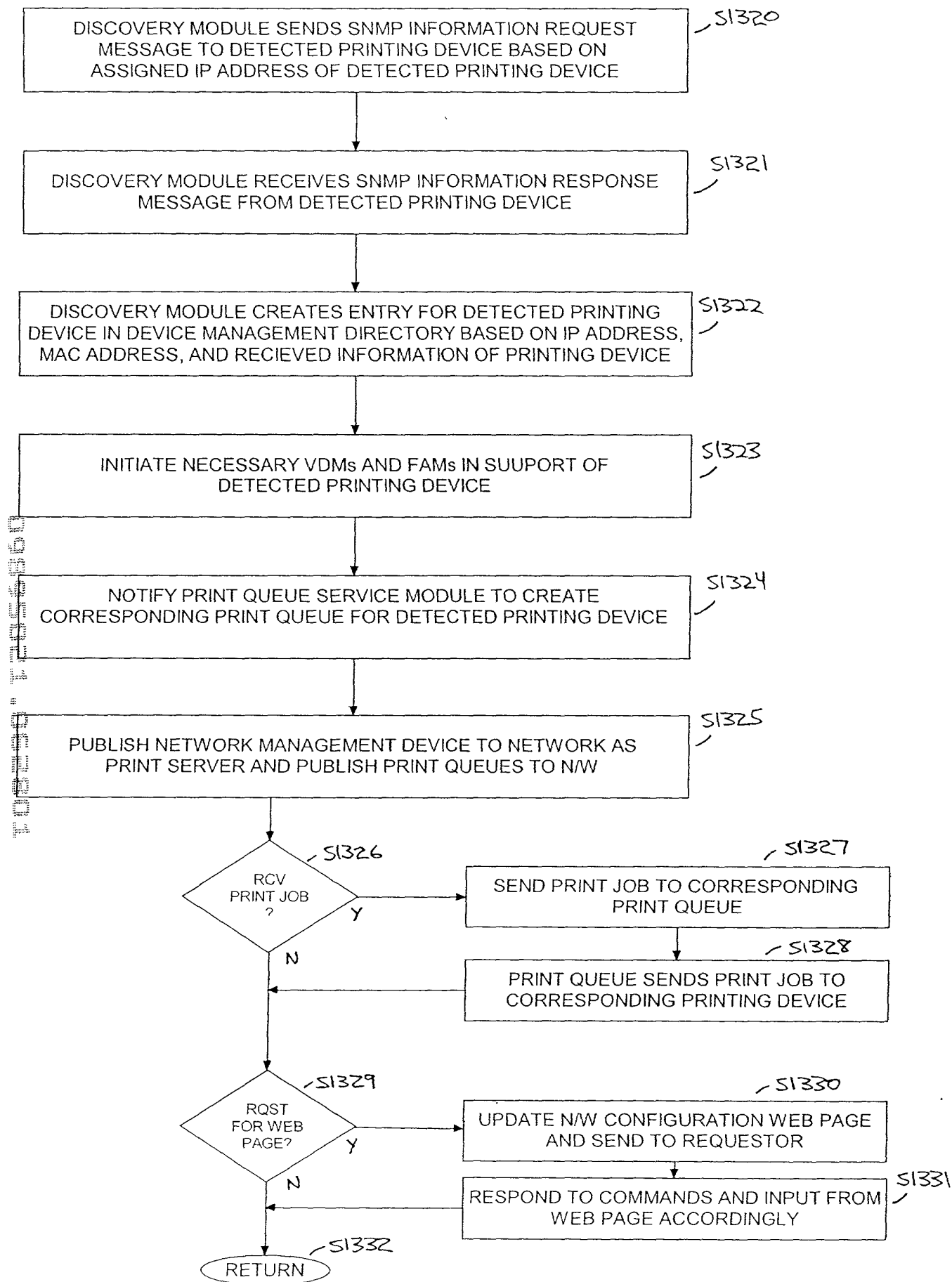


FIG. 13C

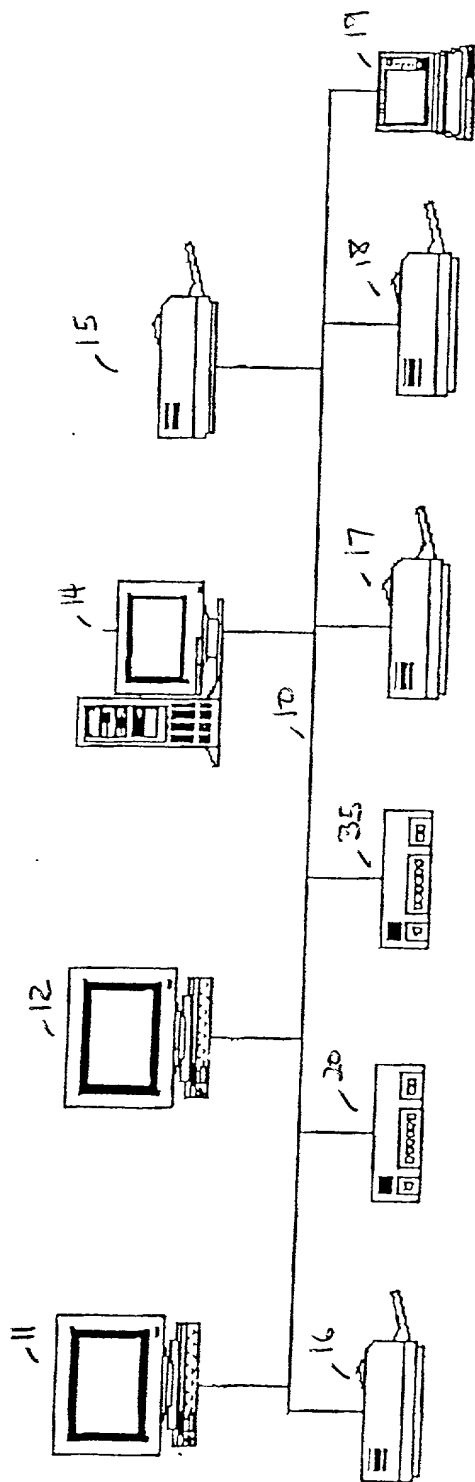


FIG. 14

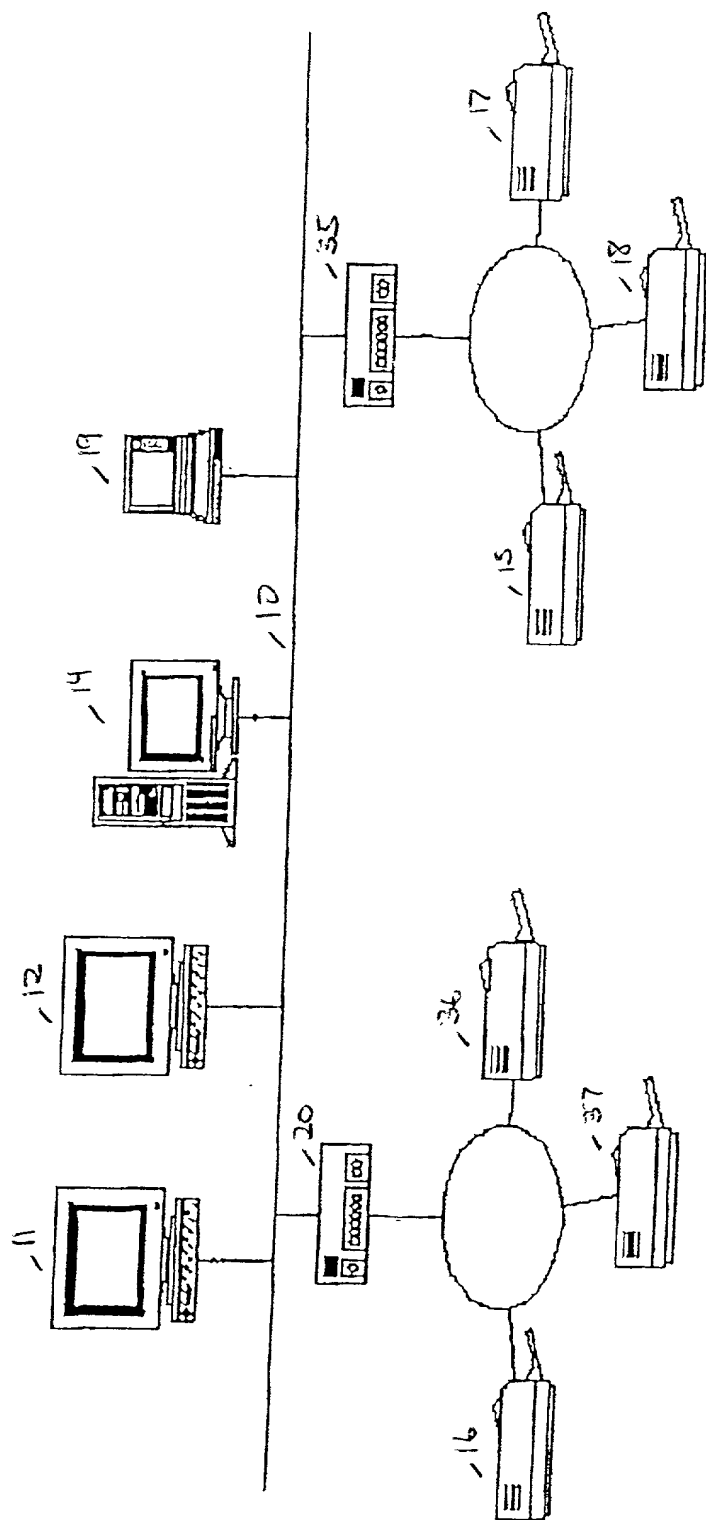


FIG. 15

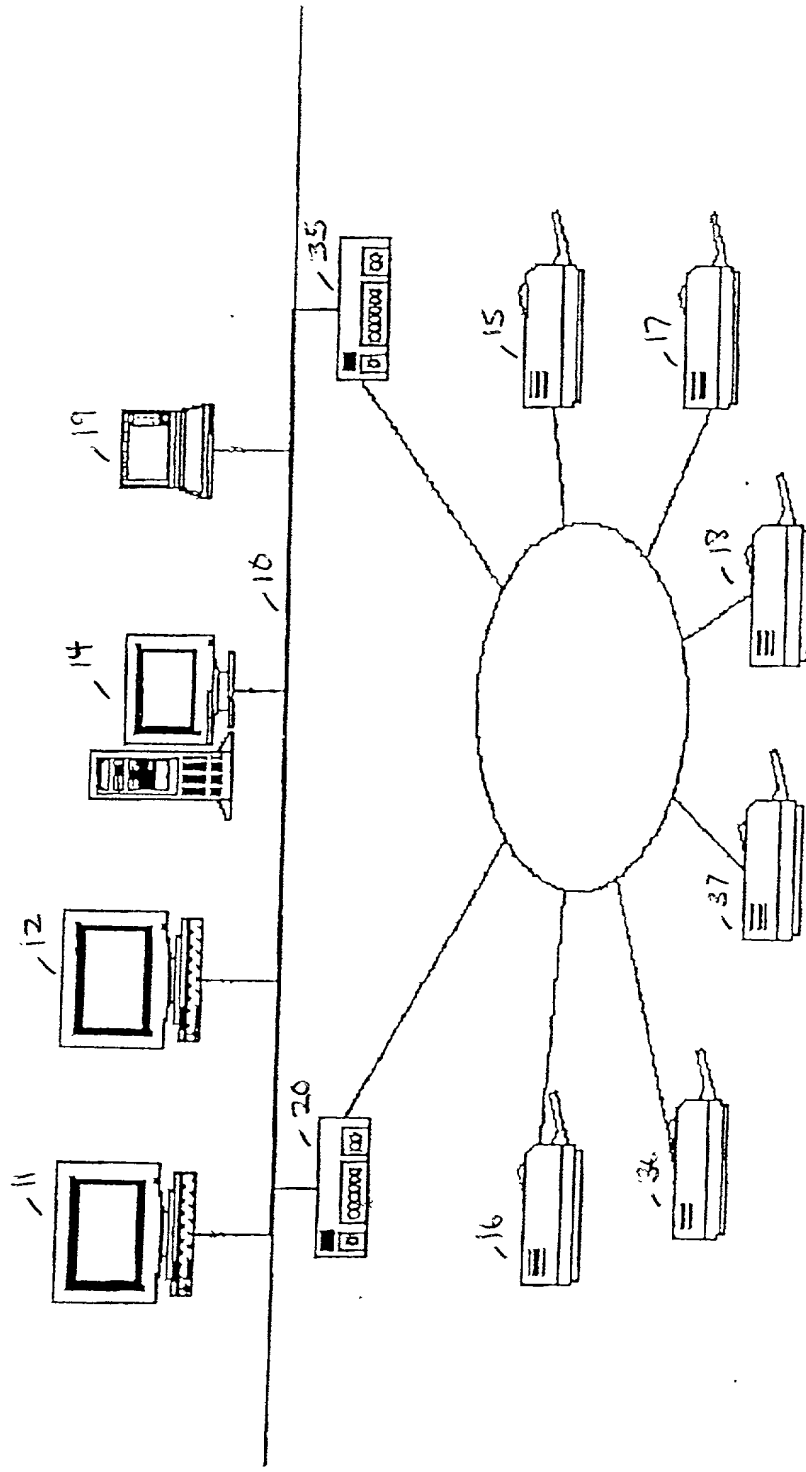


FIG. 16

FIG. 17

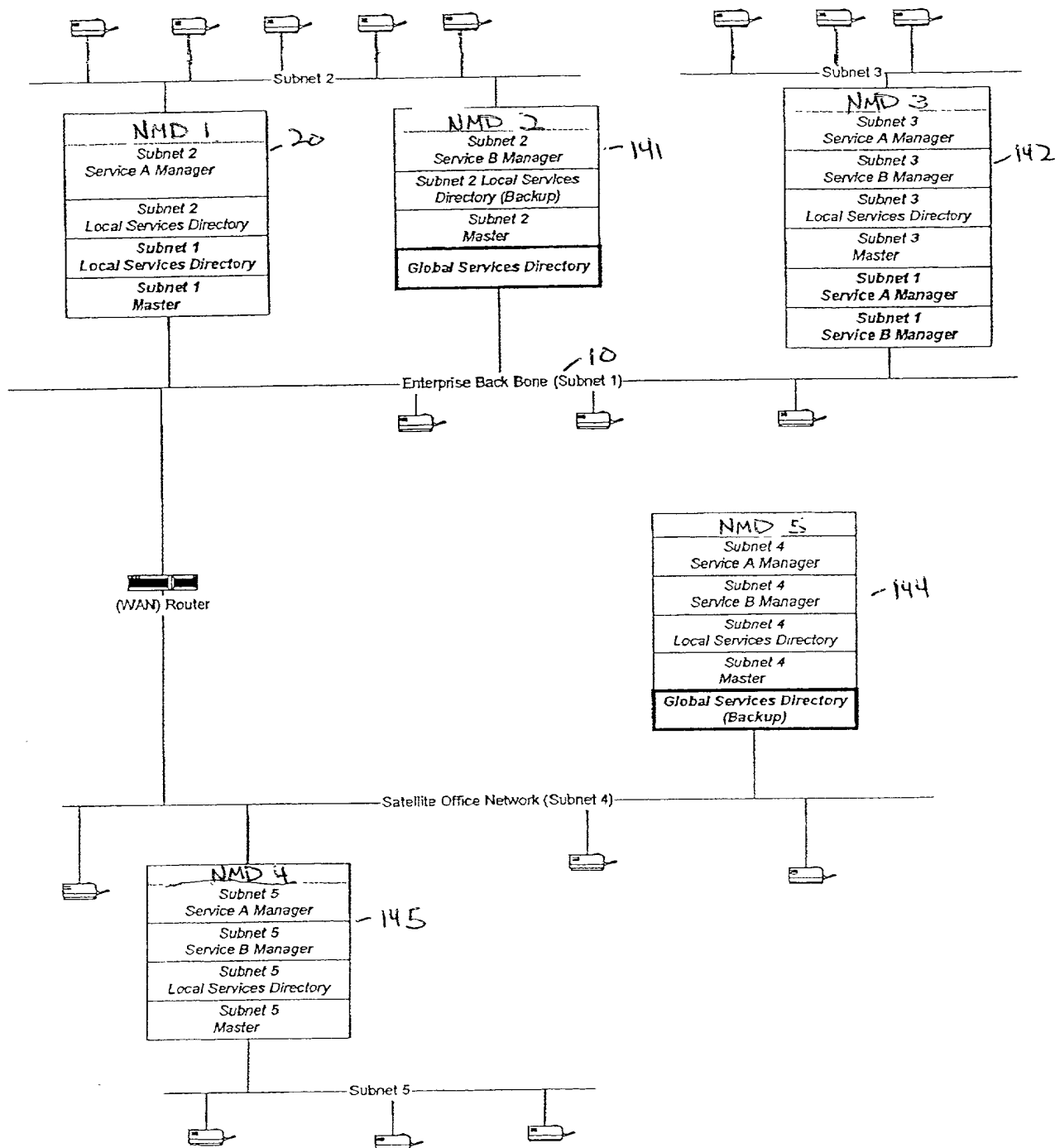


FIG. 17

NMD 1			26
Subnet	Component	State	
1	Printer QUE Service	Not Running	
1	Discovery Service	Not Running	
1	Local Services Directory	Running	
1	Master	Running	
2	Printer QUE Service	Running	
2	Discovery Service	Not Running	
2	Local Services Directory	Running	
2	Master	Not Running	
	Global Services Directory	Not Running/Backup	
NMD 2			141
Subnet	Component	State	
1	Printer QUE Service	Not Running	
1	Discovery Service	Not Running	
1	Local Services Directory	Not Running/Backup	
1	Master	Not Running	
2	Printer QUE Service	Not Running	
2	Discovery Service	Running	
2	Local Services Directory	Backup	
2	Master	Running	
	Global Services Directory	Running	
NMD 3			142
Subnet	Component	State	
1	Printer QUE Service	Running	
1	Discovery Service	Running	
1	Local Services Directory	Not Running/Backup	
1	Master	Not Running	
3	Printer QUE Service	Running	
3	Discovery Service	Running	
3	Local Services Directory	Running	
3	Master	Running	
	Global Services Directory	Not Running/Backup	
NMD 4			145
Subnet	Component	State	
4	Printer QUE Service	Running	
4	Discovery Service	Running	
4	Local Services Directory	Running	
4	Master	Running	
	Global Services Directory	Backup	
NMD 5			144
Subnet	Component	State	
4	Printer QUE Service	Not Running	
4	Discovery Service	Not Running	
4	Local Services Directory	Not Running/Backup	
4	Master	Not Running	
5	Printer QUE Service	Running	
5	Discovery Service	Running	
5	Local Services Directory	Running	
5	Master	Running	
	Global Services Directory	Not Running/Backup	

FIG. 18

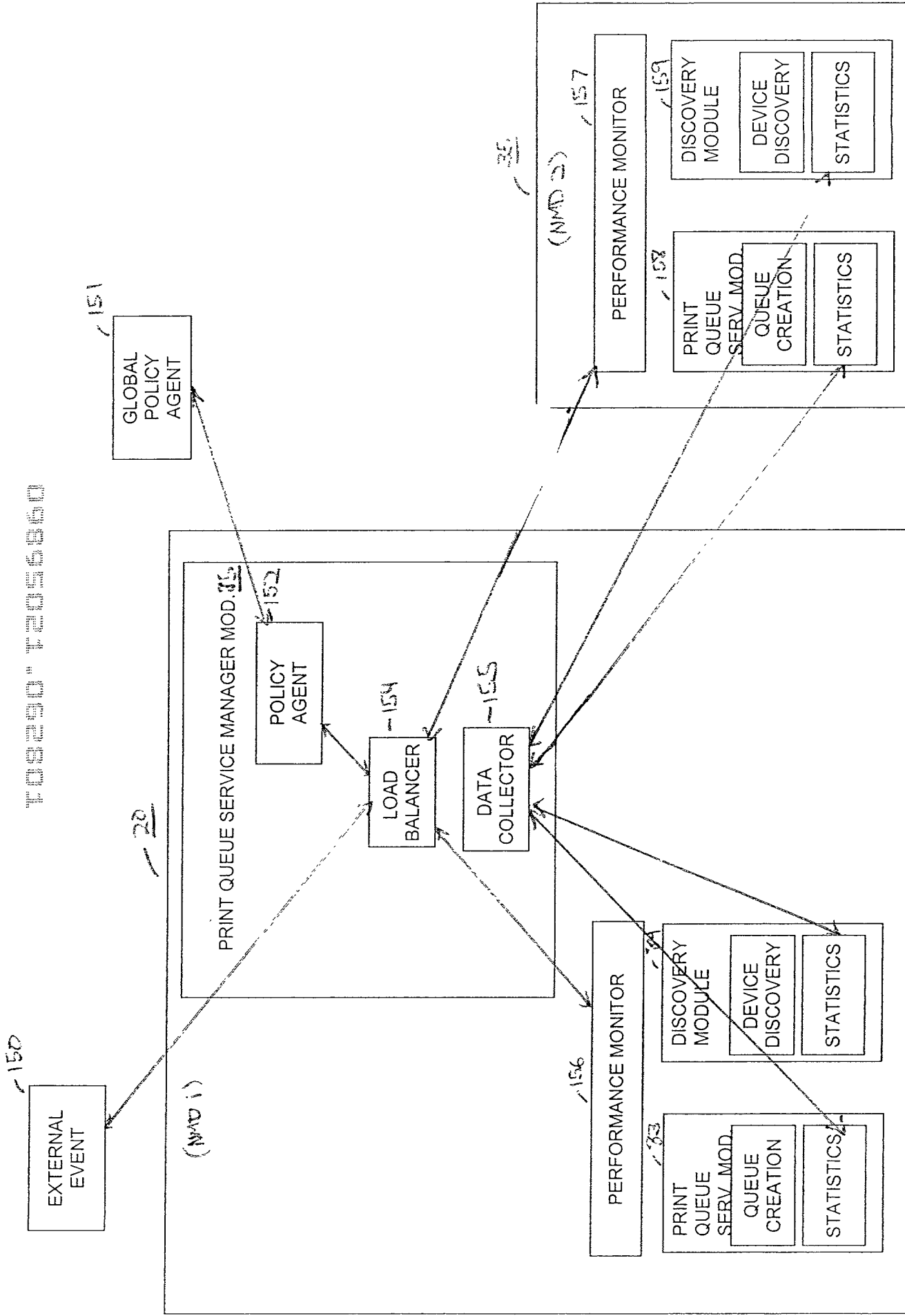


FIG. 19

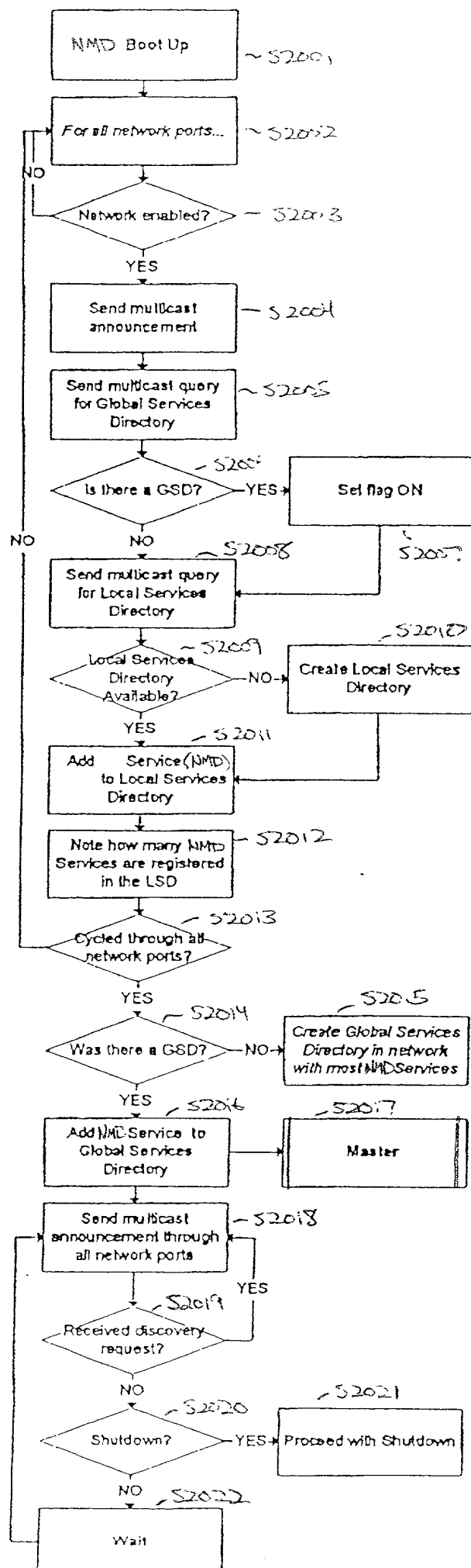


FIG. 20

```

graph TD
    S207[Master] --> S2101[For all enabled networks...]
    S2101 --> S2102[Query Local Services Directory for Master NMD]
    S2102 --> S2103{Found Master NMD}
    S2103 -- YES --> S2107{Cycled through all enabled networks?}
    S2103 -- NO --> S2104[Create Master NMD]
    S2104 --> S2105[Query each NMD for a list of supported services]
    S2105 --> S2106[For each service, determine which NMD will run the Service Manager and start the Service Manager.]
    S2106 --> S2107
    S2107 -- YES --> S2108[Service Manager]
    S2107 -- NO --> S2101
  
```

FIG. 21

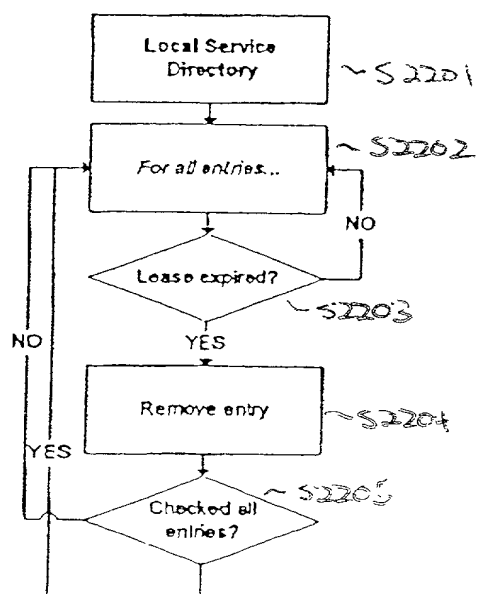


FIG. 22

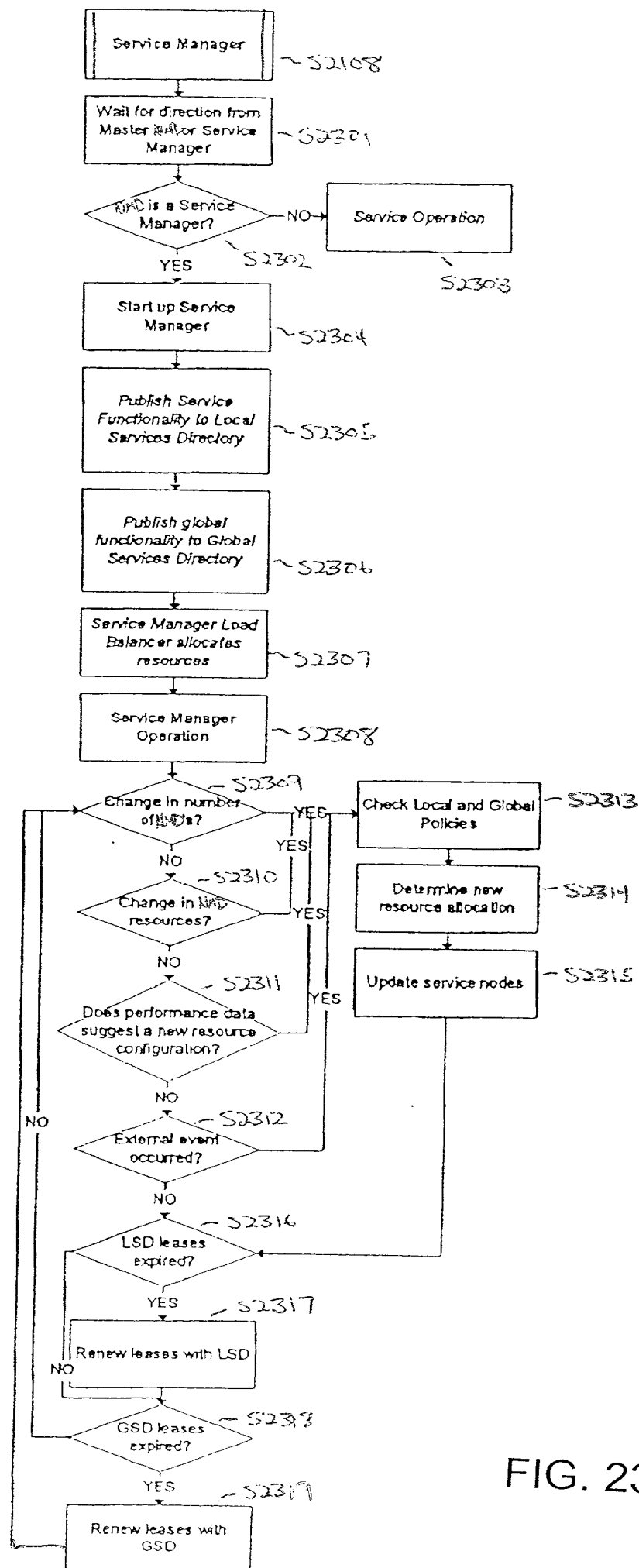


FIG. 23

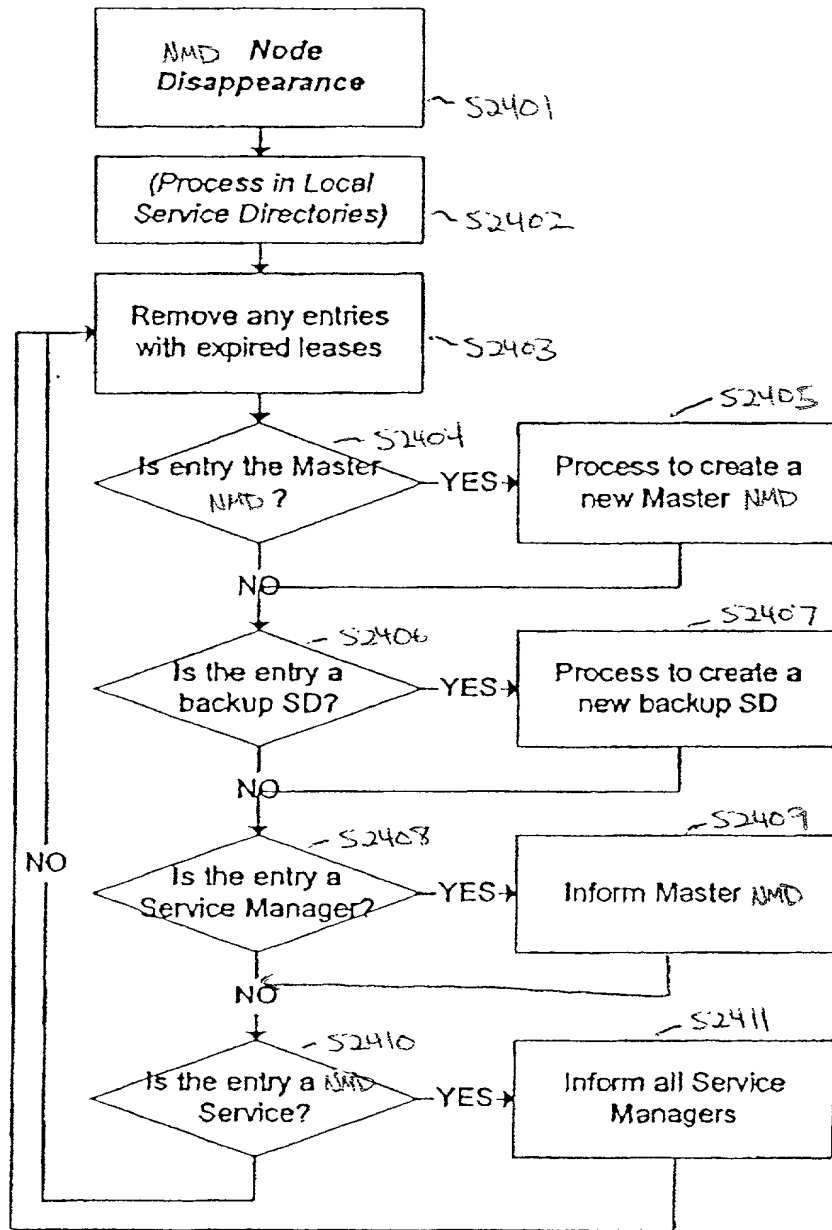


FIG. 24

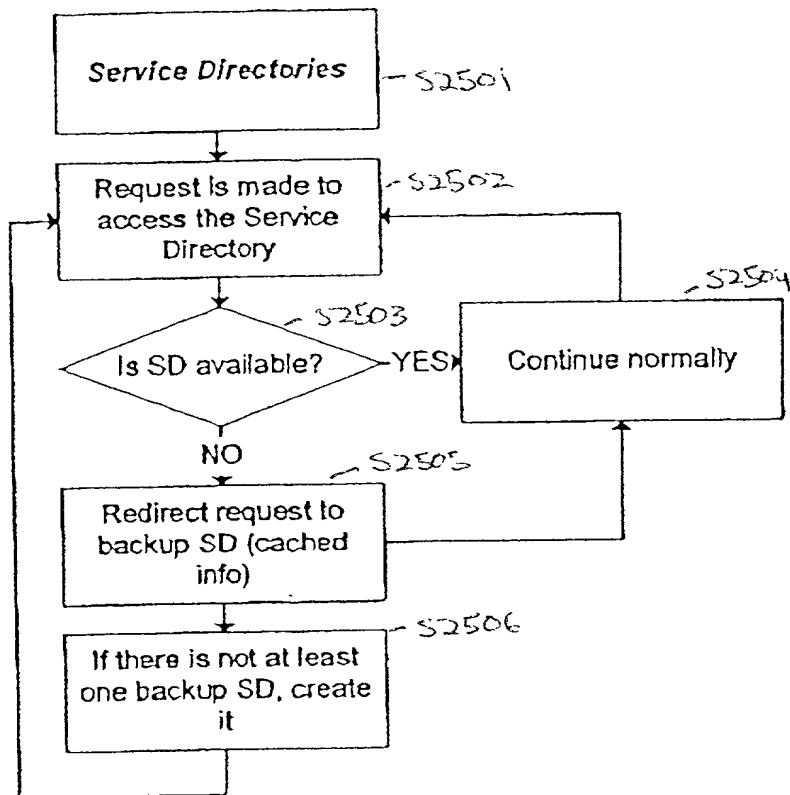


FIG. 25